

Appln. No. 09/941,879
Amendment dated January 16, 2004
Reply to Office Action of September 3, 2003

Amendments to the Claims:

Please cancel claim 14 and amend claims 1, 4-7 and 9-12 as follows. The following listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended). A sample assembly for a thermoelectric analyzer comprising:

(a) an electrically-insulating substrate having a longitudinally-central region and two longitudinally-end regions;

5 (b) an adhesive layer disposed on said longitudinally-central region and made of a material selected from a group consisting of indium and gold-tin alloy ~~a pair of junction electrode layers non-contiguously formed on said substrate;~~

10 (c) a pair of junction electrode layers formed on said two longitudinally-end regions respectively with certain distances from an adhesive layer disposed on said substrate, said adhesive layer being non-contiguous with said pair of junction electrode layers;

15 (d) a sample fixed to said adhesive layer, said sample and being non-contiguous with said pair of junction electrode layers

Appln. No. 09/941,879
Amendment dated January 16, 2004
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for thermostatic analysis in which an electric property of said sample is measured as a temperature of said sample varies;

(e) a pair of electrode layers formed on a top surface of said sample; and

20 (f) ~~two electrically conductive wires~~, a first electrically-conductive wire connecting one of said electrode layers with one of said junction electrode layers; and

(g) a second electrically-conductive wire connecting the other of said electrode layers with the other of said junction
25 electrode layers wherein an electrical property of the sample is measured as a temperature of the sample varies.

Claim 2 (Original). A sample assembly according to claim 1, wherein said adhesive layer is made of indium.

Claim 3 (Original). A sample assembly according to claim 2, wherein said substrate is made of a material selected from a group consisting of aluminum nitride, boron nitride, beryllium oxide and aluminum oxide.

Claim 4 (Currently Amended). A sample assembly according to claim 3, wherein each of said ~~pair of~~ electrode layers and said

Appln. No. 09/941,879
Amendment dated January 16, 2004
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~~pair of~~ junction electrode layers is ~~made of~~ a multilayer including a top layer which is a gold layer, and said first and
5 second electrically-conductive wires are gold wires.

Claim 5 (Currently Amended). A sample assembly according to claim 4, wherein said pair of electrode layers, said pair of junction electrode layers and said first and second electrically-conductive wire means wires are arranged mirror-symmetrical with respect to a center of said sample.

Claim 6 (Currently Amended). A sample assembly according to claim 5, wherein said sample is a compound semiconductor.

Claim 7 (Currently Amended). A sample assembly according to claim 1, wherein said adhesive layer is made of a gold-tin alloy.

Claim 8 (Original). A sample assembly according to claim 1, wherein said substrate is made of a material selected from a group consisting of aluminum nitride, boron nitride, beryllium oxide and aluminum oxide.

Claim 9 (Currently Amended). A sample assembly according to claim 1, wherein said sample assembly is adapted to be supported

Appln. No. 09/941,879
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by two support rods which also serve ~~also~~ as conductors for an electric circuit, and wherein gold washers are inserted between
5 said support rods and said junction electrode layers.

Claim 10 (Currently Amended). A sample assembly according to claim 1, wherein each of said electrode layers and said junction electrode layers is ~~made of~~ a multilayer including a top layer which is a gold layer, and said first and second electrically-conductive wire means ~~wires~~ are gold wires.

Claim 11 (Currently Amended). A sample assembly according to claim 1, wherein said pair of electrode layers, said pair of junction electrode layers and said first and second electrically-conductive wires ~~wire means~~ are arranged mirror-symmetrical with respect to a center of said sample.

Claim 12 (Currently Amended). A sample assembly according to claim 1, wherein said sample is a compound semiconductor.

Claim 13 (Original). A sample assembly according to claim 1, wherein said sample has a plane size of 5 mm x 5 mm or less.

Claim 14 (Cancelled).